

[0113] FIGS. 10(a)-10(c) show the results of this simulation with the threshold  $h$  being set at 0.7, 0.9, and 0.99, respectfully. It is clearly shown in FIGS. 10(a)-10(c) that most of the curves drop suddenly once or twice as the load increases from 0.6 to 2. ~~To provide more specific results, Table 1 lists the total number of packets transmitted in each layer when  $p_{sub,GG}=0.71$  for the three thresholds  $h=0.7$ ,  $h=0.9$  and  $h=0.99$ .~~ This data indicates that the reason why the QI curves drop suddenly at some points, when  $P_{sub,BB}$  exceeds certain value, is that almost an entire layer is lost.

[0115] An explanation for these sudden drops is now provided. In the exemplary embodiments, as explained above,  $P_{x_i,R}$  is calculated to determine which packet to deliver at the end of each mini-slot. For a long CBR video data stream, ~~such as that used in the simulation associated with FIGS. 10(a)-10(e),~~ calculation of:  $7 \times 1 = (\text{layer 0 size} = \text{layer 1 size}) * (\text{number of frames left}) * R (\text{wireless packet size}) * (\text{number of mini - slots left})$